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November, 1948

## the Lineman

RURAL ELECTRIFICATION ADMINISTRATION - U.S. DEPARTMENT OF AGRICULTURE

COMMITTEE NAMED  
FOR 1949 CONFERENCE

The sixth annual Safety and Job Training conference was held in Knoxville, Tennessee, October 4 through 8, 1948. Ed Nauert, Safety and Job Training Instructor for Texas was Chairman of the conference.

The sessions mostly were devoted to teaching demonstrations by State Safety and Job Training Instructors.

The planning committee for the 1949 conference is C. A. High, Ohio, Chairman; H. C. Potthast, Wisconsin; Joe Staff, Kansas; A. B. Blacklock, Missouri; E. H. Stovall, Mississippi; and D. B. Bidle, Illinois.

The advisory members of the committee consist of State Supervisors of Trade and Industrial Education for each of the above States, W. A. Ross, Consultant of Public Service Occupations, U. S. Office of Education and Ralph A. C. Hill, Labor Relations and Safety Specialist of REA.

IT MIGHT HAVE BEEN  
AN ACCIDENT

No one was killed, in fact no one was even hurt.

An insulator on a single phase line broke down. Arcing soon burned the conductor in two and it fell to the ground. The fault thus caused was backed up by an oil circuit breaker. This breaker went through its cycle of operation and locked open.

A crew of men was sent to place the line back into operation. They did not notice any trouble in the immediate vicinity of the oil circuit breaker and decided to close the breaker in. The breaker held. Apparently the trouble had cleared and the line was back in operation.

Soon after the line was back in service, the co-op office was deluged with telephone calls stating that a power wire was down and was setting everything around it on fire.

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## Electric Shock Kills, Cripples, Disfigures

A crew was stringing one span of secondary to provide three-wire 240-volts service. One lineman was on the transformer pole cutting the transformer over from 120-volt to 240-volt service. Another lineman on the next pole was sagging in the new span. The conductor caught in some tree limbs and when it was freed it flipped into the energized phase above. The lineman on the transformer pole was grasping the conductor with one hand and had his other hand against the transformer which was grounded. He was belted to the pole below the 'kick-kick-arm' and slid down the pole unconscious when his hooks cut out due to muscular reaction from the shock. Electrical burns were on both right and left hands.

bushing to the 7200-volt line. He was belted to the pole below the neutral. Muscular reaction from the shock caused his hooks to cut out and he slid down the pole. There were electrical burns on the left thumb, left fore and middle fingers and right forearm.

A lineman's hooks cut out. He tried to regain balance and grabbed live conductor. He received burns on the right index finger and left leg.

A lineman was changing the percentage taps on a transformer. He used an 8-foot hot stick to disconnect the transformer lead and attach it to the neutral. He moved up to change the taps and the wind blew him off balance. He

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A lineman was changing out a transformer. His left hand touched the hot lead from the



# THE LINEMAN

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for Employees of **REA** -Financed Systems

Ralph A. C. Bill, Editor

Frank H. La Master, Associate Editor

## THE JOB AHEAD

- Editorial -

At the time of the 1947 Safety and Job Training Conference in Washington, 22 states had programs actually functioning. Today, there are 35 states that have adopted a Safety and Job Training program. Most of them already have employed their instructors --- others are working out ways and means to do so. There are only a few states left where the program has not been adopted.

All this is very gratifying to know. It shows us that more and more states are realizing the distinct advantages and importance of these programs.

The REA Labor Relations and Safety Specialist's office is charged by Administrative Policy with responsibility for getting the Safety and Job Training program established throughout the country so that every REA cooperative employee from foreman down shall have the opportunity to know his job better and do it more safely. We have always enjoyed fine assistance and cooperation from the U. S. Office of Education and from all the State Trade and Industrial Education directors and supervisors.

The job ahead will be difficult. The increasing demands for our services will make it necessary for our field personnel to devote full time to servicing State programs now in operation. Full time will be devoted to assisting State Safety and Job Training instructors to develop material, Arranging adjustments requested by the cooperatives, and otherwise giving REA support to the program.

We hope to have another Field Safety Engineer soon to aid in this important work. In order to direct our field activities more efficiently, field itineraries and commitments for our field services in the future will be arranged for in the Washington office rather than by direct arrangement with field personnel. To save time and avoid conflicts, requests for our field services should be received in the Washington office well in advance of the request dates. It will be our practice in the future to notify the Chairman of each State Safety Advisory Committee, State Supervisor of Trade and Industrial Education or college department head when our Field Safety Engineer enters that state to work with the program.

Since REA's field work in connection with this activity will now be confined to servicing the State programs already in operation the remaining organizational work necessary to bring Safety and Job Training to the limited section of the country now unserved will be done by the Washington office.

Another phase of the program which we hope to strengthen is the development of training and safety material in loose-leaf form. This procedure would relieve the various programs of excessive time required in doing their own research and would assist in developing program uniformity.

We want to emphasize again that it is our desire to help and cooperate fully with all concerned in the operation and improvement of Safety and Job Training programs. This program belongs to the REA borrowers, and the job of the Labor Relations and Safety section of REA is to see that our borrowers are served. We can discharge a r duty most efficiently at the State level, but with the closest cooperation of the U. S. Office of Education, Cooperative Safety Advisory Committees, State Trade and Industrial Education officials and their instructors.

With the Safety and Job Training program growing so rapidly, a word of caution to personnel concerned in it may be in order. Training touches on many other fields of REA borrower activity--employment, management training, engineering and others. The closest possible coordination of all these activities is essential. But Safety and Job Training Instructors of REA programs and cooperating agencies should not lose sight of the fact that their basic, full-time job is **SAFETY AND JOB TRAINING FROM FOREMAN DOWN**.

It is our purpose to assist with any problems that arise in connection with your local programs; do not hesitate to call upon us.

## HARD LUCK HARRY



"NAW! I'M NOT GOIN' TO NO SAFETY CLASS. I KNOW MORE'N THEM GUYS."

## ELECTRIC SHOCK (Continued)

grabbed for something and contacted the hot phase with his right hand. There were severe electrical burns on the right hand and leg

THAT'S ALL THERE IS - -

THERE ISN'T ANY MOO.

A lineman had changed the percentage taps to increase the secondary voltage. He was checking the results with a clip-on voltmeter. When he changed position, his hooks cut out and one hand struck the terminal of the transformer bushing which had been re-energized. He was belted to the pole which retarded his fall to the ground. There were electrical burns on both hands.

What is funny about an accident? Usually, nothing. Occasionally, however, a little humor creeps into the report. The following is quoted from a recent accident report which came over our desk:

### Policy Holder's Vehicle

Make of Car - - Ford 1½ ton  
Operated for what Purpose - - Maintenance of power lines.

### Damage to Above

Parts damaged - - Front end smashed.

### Damage to Property of Others

Kind of Property - - 1 milch cow  
Extent of Damage - - Cow is still alive but very unhappy.

### Description of Accident

Date - - June 19, 1948 Hour - - 9:00 p. m.  
Where - - State highway No. 25  
Direction of Car - - North  
Speed - - 45 MPH  
Give details - - Truck went over crest of hill and collided with cow in middle of road.  
What was said after Accident - - M-o-o-o-o-o-o  
By Whom - - By Cow.

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### Discussion Points

A lineman was completing a dead end on an energized pole. As he started down the pole he placed his right hand on neutral and his left hand on the jumper which was hot (7200-volts). There were electrical burns on his left thumb and three of the other fingers of the other hand. There were also burns on left arm, right thumb and palm, and flash burns on his clothing.

A lineman was installing dead-end bells. His left hook cut out which caused him to lose his balance. When he tried to regain his balance, the back of his left hand contacted the 7200 volt primary, which was hot. The burns were on the left hand, left leg and bottom of left foot. The ring finger on his left hand may have to be amputated.

An employee had cut three small trees. They had not fallen all the way to the ground. The man climbed one of the trees, carrying his axe. His foot slipped. When he tried to catch himself with his hands, the axe hit a tree limb, glanced off and cut his chin. Lost time - two days.

1. Examine each of these accidents for position.
2. If you determine that the injured's position was wrong, would rubber gloves have prevented the accident?
3. If rubber gloves would have prevented any particular accident listed above, check to see if it would be possible to make contact with some other part of the body.
4. Check back on yourself and see if you do these same jobs from a position similar to the position of the injured in each of these accidents.
5. If your answer is 'yes', is there any good reason to believe that a similar accident will not happen to you?

## IT MIGHT HAVE (Continued)

The circuit breaker was holding and had to be opened manually.

The ground and weeds had dried out where the conductor lay which increased the resistance to a point where insufficient current flowed to operate the breaker.

### Discussion Points:

1. Is it a safe practice to close an oil circuit breaker which has locked open without first patrolling the line?
2. Does the average member or individual know enough about electricity to understand the danger of a fallen wire?
3. Suppose the individual did know that he should't touch the wire with his bare hand -- would he also know that a stick or board could not be used for this purpose?
4. Under proper conditions could a situation like this start a major forest fire or destroy ripe wheat and other crops in the field?
5. Should safe work procedures be adopted for every job and then be follower to the letter?

## Transformer Bulletins Gone

The requests for the Transformer Bulletin prepared by Technical Standards Division have us snowed under. The 800 copies which we had on hand melted away like butter in the sun. We are completely out of these and the requests are still coming in. We have tried to mail them to you the same day your request was received so you would get your pamphlet on a 'first come, first served' basis.

Requests received and unfilled will be accumulated for a period of about 3 weeks to get an estimate of how many additional copies will be needed. At that time we will have some more printed. If you have not already received your pamphlet, your request was received after the supply was exhausted, so do not look for your copy before the first of January.

Many readers also requested information as to other technical informational material which is available on electrical subjects. The Lineman plans to start a book section in the near future. This section will review electrical books, both elementary and advanced. The publisher and price of each book will also be given.

## WORKING ON DE-ENERGIZED STATION EQUIPMENT

1. Before starting work, wait until your foreman or supervisor has tested the equipment to be worked on and has indicated to you that it is safe to start work.
2. Be sure that you understand all of his instructions. If you do not understand any part of them, ask him to repeat or explain until you understand thoroughly.
3. If the working area adjoins energized equipment, suitable barricades and danger signs should be placed to prevent contact with the live equipment. Use the utmost care to keep within the de-energized area—do not go beyond it unless you are authorized to do so by your supervisor.
4. While working in and moving about the barricaded area, use great caution to keep from slipping, tripping and falling.



## CLIMBERS FOR LINEMEN

1. Use climbers that fit you. Determine this proper size by bending your knee and measuring the distance from the projecting knee bone to the arch of the shoe sole at the instep; then subtract one-half inch.
2. Keep the climber gaffs sharp. Make sure they are secure by giving them the "Ring Test." If the gaffs give off a dull sound, have them replaced promptly.
3. Always use first-class leather climber straps. Treat the straps occasionally with neatsfoot oil to keep them soft and pliable. Inspect the straps for safe condition each time before using. Extra holes punched in the straps may weaken them.
4. Do not allow your climbers to lie around where persons may stumble over or step on them, or where the paints may be damaged.
5. Avoid all weather checks in poles, knots, shakes, rot and hard places, as they are likely to cause cut-outs. Use great care when climbing in icy weather.
6. When climbing past a fellow workman who has his safety strap around a pole, take care to avoid "spurring" the strap or dragging a gaff over it and cutting it.
7. Climbers should be worn only when required in work on poles. Never wear them when doing ground work, when climbing ladders or trees, or when riding in any vehicle.



Reproduced above are two Safety Instruction Cards, issued by National Safety Council.